



CALL NO. 001

CONTRACT ID. 029999 TEST

BREATHITT COUNTY

LETTING DATE December 18, 2002

Sealed Bids will be received in the Division of Contract Procurement and/or the Auditorium located on the 1st Floor of the State Office Building until 10:00 AM EST December 18, 2002. Bids will be publicly opened and read at 10:00 AM Eastern Standard Time.

DBE CERTIFICATION REQUIRED:

DEFERRED PAYMENT: The successful bidder on this project may request a work order with an effective date prior to June 15, 2003. The request must be in writing to the Department. A work order issued at the request of the Contractor will be with the distinct understanding that payment for any work performed estimates may be delayed until July 15, 2003. A work order will be issued June 15, 2003, for this project unless the bidder requests an earlier work date.

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

(Check guaranty submitted: Cashier's Check ☐ Certified Check ☐ Bid Bond ☐)

BID BONDS WHEN SUBMITTED WILL BE RETAINED WITH THE PROPOSAL

DBE General Plan Included ☐

BID ☐

PROPOSAL ISSUED TO: _____

SPECIMEN ☐

Address

City

State

Zip

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* The following items can be referenced in the Supplemental Specifications to the Standard Specification for Road and Bridge Construction.

PART I

SCOPE OF WORK

PROJECT IDENTIFICATION AND DESCRIPTION:

BREATHITT COUNTY

BRZ 1003 (166): BRIDGE AND APPROACHES AT FROZEN CREEK 0.550MI WEST OF KY1812

DBE PARTICIPATION GOAL IS 0.00%

BREATHITT COUNTY, BRZ 1003 (166): OLD KY15 (CR1322)-HOOVER BRIDGE BRIDGE AND APPROACHES AT FROZEN CREEK 0.550MI WEST OF KY1812 .

TYPE OF WORK:

SIX-YEAR ITEM NO: *1001063.00*

GEOGRAPHIC COORDINATES: LATITUDE - *37°32'00* LONGITUDE - *83°18'00*

COMPLETION DATE: 15 WORK DAYS

LIQUIDATED DAMAGES: SEE STANDARD SPECIFICATIONS

* The following items can be referenced in the Supplemental Specifications to the Standard Specification for Road and Bridge Construction.

MATERIAL SUMMARY:

NON GROUP JOB REFER TO BID ITEM LIST			
Code No.	Item	Approximate Quantity	Unit
00001	D G A BASE	46.920	TON
00001	D G A BASE	46.920	TON
00220	CL1 ASPH BASE 0.75D PG64-22	32.510	TON
00220	CL1 ASPH BASE 0.75D PG64-22	32.510	TON
00300	CL1 ASPH SURF 0.38D PG64-22	13.410	TON
00300	CL1 ASPH SURF 0.38D PG64-22	13.410	TON
01891	ISLAND HEADER CURB TYPE 2	100.000	LF
02200	ROADWAY EXCAVATION	201.040	CUYD
02231	STRUCTURE GRANULAR BACKFILL	52.800	CUYD
02242	WATER	28.500	MGAL
02351	GUARDRAIL-STEEL W BEAM-S FACE	187.500	LF
02369	GUARDRAIL END TREATMENT TYPE 2A	1.000	EACH
02371	GUARDRAIL END TREATMENT TYPE 7	3.000	EACH
02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	4.000	EACH
02434	R/W MARKER RURAL TYPE 1	8.000	EACH
02545	CLEARING AND GRUBBING	1.000	LS
02569	DEMOBILIZATION	1.000	LS
02585	EDGE KEY	27.000	LF
02596	FABRIC-GEOTEXTILE TYPE I	280.000	SQYD
02650	MAINTAIN AND CONTROL TRAFFIC	1.000	LS
02701	TEMPORARY SILT FENCE	182.000	LF
02705	SILT CHECK	1.000	EACH
02708	CLEAN SILT CHECK	1.000	EACH
02709	CLEAN TEMPORARY SILT FENCE	364.000	LF
02726	STAKING	1.000	LS
02731	REMOVE STRUCTURE	1.000	LS
02742	TRAINEE PAYMENT REIMBURSEMENT	1600.000	HOUR
02998	MASONRY COATING	372.800	SQYD
03299	ARMORED EDGE FOR CONCRETE	48.000	LF
05953	TEMP SEEDING AND PROTECTION	127.800	SQYD
05985	SEEDING AND PROTECTION	1278.000	SQYD
08002	STRUCTURE EXCAV-SOLID ROCK	48.600	CUYD
08003	FOUNDATION PREPARATION	1.000	LS
08019	CYCLOPEAN STONE RIP RAP	280.000	TON

* The following items can be referenced in the Supplemental Specifications to the Standard Specification for Road and Bridge Construction.

08033	TEST PILES	22.00C LF
08046	PILES-STEEL HP12X53	110.00C LF
08094	PILE POINTS-12 INCH	6.00C EACH
08100	CONCRETE-CLASS A	87.30C CUYD
08104	CONCRETE-CLASS AA	109.20C CUYD
08150	STEEL REINFORCEMENT	5235.00C LB
08151	STEEL REINFORCEMENT-EPOXY COATED	20830.00C LB
08671	PRECAST PC BOX BEAM SB33	404.00C LF

* The following items can be referenced in the Supplemental Specifications to the Standard Specification for Road and Bridge Construction.

* The following items can be referenced in the Supplemental Specifications to the Standard Specification for Road and Bridge Construction.

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be incorporated into the proposal when the bid is submitted to the Kentucky Department of Highways. Failure to use the correct and most recent bid sheet(s) may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Highway Bid Program available on the Internet web site of the Department of Highways, Division of Contract Procurement. (www.kytc.state.ky.us/contract)

The Bidder must download the bid items created from the web site to prepare a bid proposal for submission to the Department. The bidder must insert the completed bid item sheets printed from the Program into the bidder's proposal and submit with the disk created by said program.

JOINT VENTURE BIDDING

Joint Venture bidding is permissible. However, both companies MUST purchase a bidding proposal. Either proposal may be submitted but must contain the company names and signatures of both parties where required. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

ANTICIPATED EARNINGS SCHEDULE

In order for the Cabinet to maximize the use of its resources more efficiently, the contractor shall, prior to issuance of notice to begin work, submit an anticipated earnings schedule broken down by month for the expected life of the contract for any project with a bid over \$5,000,000. The contractor will be provided a spreadsheet to expedite the preparation of this schedule upon award of the contract. No direct payment will be allowed for the preparation and submittal of this schedule.

In the event the Engineer determines that there are inadequate or insufficient road funds available under the contract for the payment of Engineer's estimates for work on the project as they come due, the Engineer may suspend payment for all or a part of the contract. If payment is suspended, the contractor may have the option, with the written agreement of the Engineer, of continuing performance under the contract. If the contractor suspends performance, he shall not resume performance until he receives a back to work notice from the Engineer. In the event that the Engineer suspends payment for all or part of the project as provided herein, the contractor waives any and all right to bring any claim for damages as a result of the suspension or delayed payment.

In the event the Engineer determines that there are inadequate or insufficient road funds available for the payment of Engineer's estimates for work on the project as they come due, the Engineer may at his discretion, by written notice 10 days in advance, terminate all or part of the contract. The Cabinet will remain obligated to pay, as soon as funds are available, all actual items of work performed prior to the contractor's receipt of the notice termination. The contractor shall be entitled to reasonable close out costs attendant to termination of the

contract under this provision, but in no event shall the contractor be entitled to more than 10% of the total contract price.

The contractor agrees to all terms and conditions stated above in the event there are inadequate or insufficient funds available under the contract for payment, and contractor further expressly waives any right to assert a claim or bring any form of action against the Cabinet under the contract or pursuant to Kentucky law or regulation, including but not limited to KRS Chapter 45A or KRS Chapter 13B.

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Transportation Cabinet from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from suspension or termination under this section. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person under the contract.

In the event of any inconsistent provisions within this contract with respect to this section and any other section, the provisions of this section shall govern and control.

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the 2000 Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating
102.08 Irregular Proposals
102.09 Proposal Guaranty

102.10 Delivery of Proposals
102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

FHWA 1273

The requirements of Paragraph VI of FHWA 1273 does not apply to projects with a total cost of less than \$1,000,000.00.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 40 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor

shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE READ PUBLICLY. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

The certification statement is located on the last page of this proposal. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

All bidders are encouraged to submit their General DBE Participation Plan with their bid on the official form. Lowest responsive bidders whose bid packages include DBE Participation Plans may be awarded the contract at the next Awards Committee meeting provided that the DBE goal is met. The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item, unit, quantity, unit price and total amount of the work to be performed by the individual DBE;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows:
 - a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
 - The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal

business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and

- the amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.
- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
 - c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
4. Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
 5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

The apparent low bidder who does not submit a General DBE Participation Plan with the bid shall submit it within 10 calendar days after receipt of notification that they are the apparent low bidder. The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Participation Plan.

Detailed DBE Participation Plan forms will be included in the Contractor Package presented to successful bidders following the awarding of the project. The Detailed DBE Participation Plan must be completed and returned to Contract Procurement in accordance with Cabinet policy. A copy of the blank estimate will be included with the Detailed DBE Participation Plan to list sequence items by PCN (Project Control Number).

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1. Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2. Whether the bidder provided solicitations through all reasonable and available means;
3. Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4. Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
5. Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6. Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7. Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

Prime contractors will incorporate a requirement into DBE subcontracts, including supply contracts, that DBEs must provide to the Division of Construction, a copy of all checks received from the prime contractor within seven days of receipt of payment for work performed on Cabinet projects. Checks to DBE subcontractors must include the PCN number, estimate number, and the sequence and quantity.

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

**Kentucky Transportation Cabinet
General DBE Participation Plan***

3/25/2002

Letting Date: _____

Project Code Number (PCN) _____

Project Number: _____

Designated DBE Goal % _____

Prime Contractor _____

DBE Company Name _____

Address _____

City, State, Zip _____

Federal Tax ID _____

Type of DBE Work: (all applicable)

_____ Supplier _____ Subcontractor _____ Manufacturer _____ Engineering _____ Other _____

Itemized work to be performed by DBE Company:

Supplier 60% Y/N	Item Number	Description of Participation	Unit of Measure	Quantity to be Performed by DBE	DBE Unit Price **	Dollar Amount (based on DBE prices)

**Note: 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment

Total This DBE

Total Bid

% Credited toward Goal, this DBE

Prime Contractor's Signature: _____

Title: _____

Date: _____

DBE Participant Signature: _____

Title: _____

Date: _____

***This form must be completed for each DBE participant**

DBE CONTRACT GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract is _____% of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in at least the percent of the contract as set forth above as goals for this contract.

TRAINEES

In Compliance with the "TRAINING SPECIAL PROVISION" included in Part III of the Proposal, the Contractor will be required to employ _____ trainee(s) (_____) for this contract.

NHS PROJECTS

This project is on the *NATIONAL HIGHWAY SYSTEM*.

ASPHALT BASE PRICE

The Asphalt Base Price shall be \$170.00 (English) as applicable in Section 109.07 of the *2000 Standard Specifications*.

ASPHALT MIXTURE

The rate of application for all asphalt mixtures shall be estimated at 110 lbs/sy per inch of depth, unless otherwise noted.

DGA BASE

The rate of application for DGA Base shall be estimated at 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

The rate of application shall be estimated at 115 lbs/sy per inch of depth. Payment for necessary grading and/or shaping of existing shoulders prior to placing of Dense Graded Aggregate Base shall be included in the unit price bid per ton for Dense Graded Aggregate Base.

SLAG ALTERNATES

Asphalt Surface-Slag shall be estimated at 102 lbs/sy per inch of depth.

Blast furnace slag may be utilized in an aggregate blend in Asphalt Binder and Base in accordance with approved mix designs and current specifications estimated at 110 lb/sy per inch of depth.

INCIDENTAL SURFACING

Item _____ through Item _____

**SPECIAL NOTE FOR GRADING,
RESHAPING & COMPACTING BY THE COUNTY
FOR ASPHALT INITIAL TREATMENT**

The _____ County Fiscal Court shall be responsible for grading, reshaping and compacting the existing Traffic Bound Material (TBM) base prior to the Asphalt Initial Treatment.

The Engineer will coordinate the operations of the Contractor and the County Fiscal Court.

grading.initialtreatment.county
05/12/2003

SPECIAL NOTE FOR ROLLED IN RUMBLE STRIPS

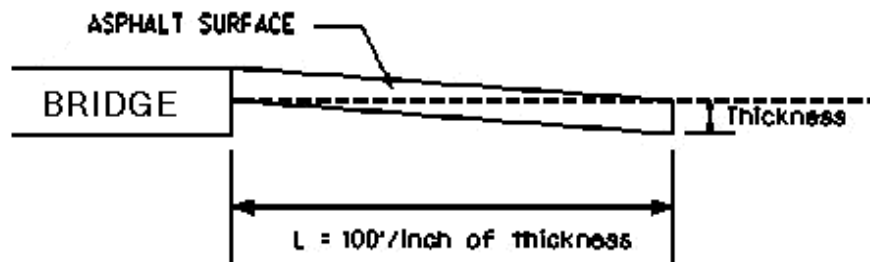
Contrary to Section 403.03.08 of the 2000 Standard Specifications, construct rolled rumble strips on all mainline and ramp shoulders. Do not mill rumble strips across public road intersections. Rolled Rumble Strips will not be measured for payment, but shall be incidental to the asphalt surface placed on the shoulders.

rolled rumble strip
05/12/2003

**SPECIAL NOTE FOR EDGE KEY FOR
BRIDGE DECK OVERLAY**

Construct Edge Keys at each end of the bridge, as applicable. Cut out the existing asphalt surface to the required depth and width shown on the attached drawing. Heel new surface into the existing surface. The Department will pay for this work at the contract unit price per ton for "Asphalt Pavement Milling and Texturing", which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

EDGE KEY



Thickness =

L =

L = Length of Edge Key

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

BEARING DETAILS

ELASTOMETRIC BEARING PADS FOR PRESTRESSED BEAMS

WELDING STEEL BRIDGES (SP-4)

CORROSION RESISTANT GUARDRAIL (SN-8N)

SUPPLEMENTAL SPECS - EFFECTIVE JUNE 2003

SPECIFICATIONS REFERENCE

2000 SPECIFICATIONS

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 1998*, and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2000* and *Standard Drawings, Edition of 2003*.

2001 SUPPLEMENTAL SPECIFICATIONS

The *2001 Supplemental Specifications* to the *2000 Standard Specifications for Road and Bridge Construction* shall apply to this project.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2000 Edition
(Effective with the June 27, 2003 Letting)**

SECTION:	Complete Standard Specifications
REVISION:	Replace all references to "PCC Pavement" with "JPC Pavement"
SUBSECTION:	102.07.01 General.
REVISION:	<p>Replace the first sentence with the following:</p> <p>Submit the Bid Proposal on the forms furnished by the Department including the Highway Bid Program bid item sheets and disk created from the Department's internet web site.</p>
SUBSECTION:	102.07.02 Computer Bidding.
REVISION:	<p>Replace the subsection with the following:</p> <p>Subsequent to ordering a Bid Proposal for a specific project, use the Department's Highway Bid Program on the internet web site of the Department of Highways, Division of Contract Procurement. Download the bid item quantities from the Department's web site to prepare a Bid Proposal for submission to the Department. Insert the completed bid item sheets printed from the Highway Bid Program into the Proposal and submit along with the disk created by said program.</p> <p>In case of a dispute, the Bid Proposal and bid item sheets created by the Highway Bid Program take precedence over any bid submittal.</p> <p>Furthermore the Department takes no responsibility for loss, damage of disks or the compatibility with the bidder's computer equipment or software.</p>
SUBSECTION:	102.08 IRREGULAR BID PROPOSALS.
REVISION:	<p>Add the following to the first set of items:</p> <p>4) Fails to submit a disk created from the Highway Bid Program</p>
SUBSECTION:	102.08 IRREGULAR BID PROPOSALS.
REVISION:	<p>Replace 1) of the second set of items with the following:</p> <p>1) when the Bid Proposal is on a form other than that furnished by the Department or printed from other than the Highway Bid Program , or when the form is altered or any part is detached.</p>
SUBSECTION:	103.05 REQUIREMENT OF CONTRACT BOND.
REVISION:	<p>Replace the first sentence of the first paragraph with the following:</p> <p>To be acceptable to the Department, the surety must have a minimum A. M. Best rating of an "A-", be listed on the U.S. Treasury Listing of approved sureties for an amount equal to or greater than the amount of the bond and be an admitted carrier in the Commonwealth of Kentucky.</p> <p>Replace the last sentence of the first paragraph with the following:</p> <p>If at any time during the performance of the Contract the surety company falls below the minimum acceptable requirements, the Contractor shall file a new bond in an amount established by the Commissioner, or his designee, within 14 calendar days of such failure to meet the minimum requirements.</p> <p>Add the following to the end of the subsection:</p> <p>The Department reserves the right to copy the surety on all of its communications with the Contractor concerning the Contractor's performance, or performance deficiencies, on the project and further reserves the right to communicate directly with the surety to inform them of the Contractor's performance, or performance deficiencies, on the bonded project.</p>
SUBSECTION:	108.02 PRECONSTRUCTION CONFERENCE.
REVISION:	<p>Add the following to the first paragraph:</p> <p>Include a plan for updating the schedule. As a minimum, the schedule must be updated whenever a situation arises or event occurs that significantly affects the progress of the work or when the Engineer directs.</p>

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SUBSECTION:	109.04.02 Cost-Plus Work.
PART:	C) Equipment and Tools.
REVISION:	Replace with the second, third, and fourth paragraphs with the following: For any machinery or special equipment that the Engineer has authorized for use and the Contractor has used, the Department will pay the rental rate stated on the rental company invoice for the actual agreed time and rate that such equipment is required on the work and will add an amount equal to 15 percent of the rental sum as full compensation for fuel, lubricants, and filters. The Department will pay for equipment that the Contractor is already using on the project, and which is not obtained specifically for the cost-plus work based on an hourly rate. The Department will determine the hourly rate by taking the Blue Book monthly rental rate, adjusted for age and geographic region, dividing it by 176 and adding the Blue Book estimated operational cost. The Department will pay rental rates for equipment required to be on standby at one half the normal rate, excluding operational cost, and pay for standby time for a maximum of 8 hours per day and 40 hours per week.
SUBSECTION:	109.04.02 Cost-Plus Work.
PART:	F) Overhead.
REVISION:	Add the following new part: F) Overhead. The Department will pay for overhead cost associated with administering the work, not to exceed 5 percent, when the work is done by a Subcontractor.
SUBSECTION:	112.02 MATERIALS AND EQUIPMENT.
REVISION:	Add the following: Provide certification that all Work Zone Category I and II Devices are compliant with NCHRP 350.
SUBSECTION:	112.02.05 Temporary Pavement Markings.
PART:	C) Temporary Striping.
NUMBER:	2) Paint.
REVISION:	Replace with the following: 2) Paint. Conform to Section 842
SUBSECTION:	112.02.05 Temporary Pavement Markings.
PART:	C) Temporary Striping.
NUMBER:	3) Drop on Beads.
REVISION:	Replace with the following: 3) Drop on Beads. Conform to Section 839
SUBSECTION:	112.02.11 Truck Mounted Attenuator (TMA).
REVISION:	Replace with the following: 112.02.11 Truck Mounted Attenuator (TMA). Use only NCHRP 350 TL-3 compliant devices.
SUBSECTION:	112.03.01 General Traffic Control.
PART:	G) Signs.
REVISION:	Replace the first sentence with the following: Completely cover all lettering and symbols on existing, permanent, and temporary signs which do not properly apply to the current traffic phasing, and maintain the covering until the signs are applicable or are removed.
SUBSECTION:	112.03.01 General Traffic Control.
PART:	J) TMAs.
REVISION:	Replace the first sentence with the following: Mount the attenuator on a support vehicle that is in close conformity to the one it was tested with for NCHRP compliance.

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SUBSECTION:	112.04.02 Signs.
REVISION:	Replace the subsection with the following: 112.04.02 Signs. The Department will measure the quantity in square feet. The Department will measure each individual sign the first time it is installed and each additional time that it is installed through post mounting. The Department will not measure sign maintenance or subsequent relocation of original signs by methods other than post mounting and will consider them incidental to this item of work. The Department will measure signs for payment when they are required by the MUTCD, Standard Drawings, TCP, the Contract, or the Engineer. Additional signs will be considered incidental to this item of work. The Department will measure replacement units for payment, only when the Engineer determines replacement is required resulting from normal deterioration of the signs due to environmental conditions.
SUBSECTION:	112.03.01 General Traffic Control.
PART:	I) Temporary Traffic Signals.
REVISION:	Replace the MUTCD reference "Section 4B" with "Chapter 4D"
SECTION:	201 STAKING. Delete the section and replace with the following: 201.01 DESCRIPTION. When listed as a bid item, furnish all personnel, equipment, stakes, and hubs necessary to construct the roadway and appurtenant structures to the grade and alignment specified in the Contract. When no bid item is listed, the Department will perform staking. 201.02 MATERIALS AND EQUIPMENT. Reserved. 201.03 CONSTRUCTION 201.03.01 Contractor Staking. Perform all necessary surveying under the general supervision of a Professional Engineer or licensed Land Surveyor. The Department's Engineer will perform the following: 1) Provide adequate referencing of control points to allow prompt re-establishment of the survey centerline, right of way, ramps, crossroads, and frontage roads during construction. 2) Set permanent or temporary bench marks as required. 3) Take any cross sections to verify the accuracy of the original ground information. 4) Take "check sections" to verify that construction is to grade and alignment as specified in the Contract. The Contractor will perform the following: 1) Re-establish the centerline and set such additional points as may be necessary for construction of the project. Verify the accuracy of the horizontal and vertical control as established by the Department's Engineer before beginning construction. 2) Establish clearing lines so that the project may be cleared without violating the limits of the right of way. 3) Set slope stakes right and left of the survey centerline at 50-foot to 100-foot intervals to guide the contractor in constructing the cuts and fills. These stakes are generally set to shoulder grade for fills and ditch grade for cuts. The cut or fill information, slope, and distance from centerline should be on the front face of the stake; the station number should be on the back of the stake. This stake should be guarded with a lath that has the station number written on the side facing the centerline. 4) Grade Stakes (Bluetops). Fine grade control will be set to aid the Contractor in establishing the typical sub-grade section. When using conventional transit and chain methods this fine grade control will be established by setting hubs(referred to as blue tops) every 50 feet to the sub-grade section. These blue tops are set to the hundredth of a foot in elevation and are located left and right of pavement centerline, usually at the edge of metal. Bluetops will be set for the top of sub-grade and the top of aggregate base and/or drainage blanket material. Refer to Section 204.03.10 and Section 302.03.06 for construction tolerances of sub-grade and aggregate base or drainage blanket.

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revision continued	<div>5) Stake all structures (bridges, culverts, pipe, and other appurtenances) so that they can be built to the proper line and grade as shown on the plans and to perform the function for which they were designed.</div> <div>201.03.02 Department Staking. The Department’s Engineer will set all stakes necessary for the construction of the roadway and appurtenant structures to the proper grade and alignment in accordance with the contract.</div> <div>201.03.03 Electronic Surveying. The Department encourages the use of new and advanced technology in the construction of its roads and structures. However, the following restrictions apply:<div><div>1) Tolerances are unchanged. Refer to Section 204.03.10 and Section 302.03.06.</div><div>2) Sub-grade check sections are to be done every 500 feet in tangent sections and every 100 feet in curves using conventional survey methods to establish bluetops and to verify the correct operation of the electronic equipment.</div><div>3) The Contractor will submit his electronic data files to the Department’s Engineer at the beginning of the project so that the Engineer can reference the data for verification of the field work.</div></div></div> <div>201.04 MEASUREMENT.</div> <div>201.04.01 Contractor Staking. When listed as a bid item, the Department will measure staking as lump sum. The Department will not measure surveying required to correct any errors or inaccuracies resulting from construction operations for payment.</div> <div>201.04.02 Department Staking. The Department will not measure quantities for payment. When any stakes are disturbed due to unwarranted negligence of the Contractor, the Department will measure the work required to reset the stakes and deduct the cost from monies due the Contractor.</div> <div>201.05 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:</div> <table><tr><td>Code</td><td>Pay Item</td><td>Pay Unit</td></tr><tr><td>2726</td><td>Staking</td><td>Lump Sum</td></tr></table> <div>The Department will consider payment as full compensation for all work required under this section.</div>	Code	Pay Item	Pay Unit	2726	Staking	Lump Sum
Code	Pay Item	Pay Unit					
2726	Staking	Lump Sum					
<div>SUBSECTION: REVISION:</div>	<div>204.03.08 Disposal of Wasted Materials.</div> <div>Add the following to the end of the second paragraph:</div> <div>The Department will pay for the geotechnical investigation and analysis of the proposed waste area when one is requested by the Engineer. Ensure all work is performed by a pre-qualified geotechnical consultant and according to the Department’s Geotechnical Manual.</div>						
<div>SUBSECTION: PART: REVISION:</div>	<div>206.03.02 Embankment.</div> <div>C) Embankment of Rock/Shale/Soil Combination.</div> <div>Replace the first sentence with the following:</div> <div>Construct in lifts not exceeding one foot in thickness; however, when the thickness of the rock exceeds one foot, the Department may allow the thickness of the embankment lifts to increase, as necessary, due to the nature of the material, up to 2 feet. Apply a sufficient amount of water to induce slaking when mixtures contain 50 percent or more non-durable shale.</div>						

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SUBSECTION:	206.03.02 Embankment.
PART:	D) Embankments Principally of Non-Durable Shale (SDI less than 95 according to KM 64-513).
REVISION:	Replace the fourth and fifth sentences with following: Uniformly incorporate the water throughout the lift using a multiple gang disk with a minimum disk diameter of 2 feet or other suitable equipment the Engineer approves. Compact with 30-ton static tamping foot rollers in conjunction with vibratory tamping foot rollers that produce a minimum compactive effort of 27 tons and direct hauling equipment over the full width of the lift to aid in compaction. When questions arise regarding the durability of shale, use KM 64-514 to estimate the durability of the material in the field.
SUBSECTION:	206.04.01 Embankment-in-Place.
REVISION:	Add the following: The Department may make adjustments to embankment-in-place projects when there is actually unanticipated waste on the project. Waste generated by the project phasing will not be considered for adjustment. The Department will make an adjustment for the actual costs incurred by the Contractor.
SUBSECTION:	208.03.03 Application of Chemical.
PART:	B) Lime.
NUMBER:	3)
REVISION:	Replace the second sentence with the following: Use only when saturated soil conditions exist and the slurry method would worsen the situation or when weather conditions prohibit the use of slurry.
SUBSECTION:	208.03.06 Curing and Protection.
REVISION:	Replace the first sentence of the fourth paragraph with the following: Do not allow any traffic or equipment on the finished surface until 7 days above 40 °F curing is completed or the roadbed cores achieve a minimum strength requirement of 75 psi.
SUBSECTION:	208.04.02 Lime.
REVISION:	Add the following to the end of the second paragraph: When hydrate or quicklime is furnished for dry application, the Department will measure the actual quantity applied to the roadbed.
SUBSECTION:	212.03.03 Permanent Seeding and Protection.
PART:	A) Seed Mixtures for Permanent Seeding.
REVISION:	Replace with the following: A) Seed Mixture for Permanent Seeding. Use seed Mixture No. I, No. III, or as the Contract specifies. Mixture No. I: 75% Kentucky 31 Fescue (<i>Festuca arundinacea</i>) 10% Red Top (<i>Agrostis alba</i>) 5% White Dutch Clover (<i>Trifolium repens</i>) 10% Rygrass, perennial (<i>Lolium perenne</i>) Mixture No. III: 30% Kentucky 31 Fescue (<i>Festuca arundinacea</i>) 15% Red Top (<i>Agrostis alba</i>) 15% Partridge Pea (<i>Cassia fasciculata</i>) 20% Sericea Lespedeza 10% Sweet Clover – Yellow (<i>Melilotus officinalis</i>) 10% Rygrass, perennial (<i>Lolium perenne</i>)

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SUBSECTION:	212.03.03 Permanent Seeding and Protection.
PART:	B) Procedures for Permanent Seeding.
REVISION:	Add the following after the third sentence: Remove all rock and dirt clods over 4 inches in diameter from the surface of the seedbed.
SUBSECTION:	212.03.03 Permanent Seeding and Protection.
PART:	C) Crown Vetch.
REVISION:	Replace the first sentence with the following: Sow crown vetch seed on all areas having a slope 3:1 or steeper and consisting of soil or mixtures of broken rock and soil.
SUBSECTION:	212.03.03 Permanent Seeding and Protection.
PART:	E) Erosion Control Blanket.
REVISION:	Replace the first sentence with the following: Install erosion control blankets in ditches, except those to be paved or rock lined, to a flow depth of 1.5 feet.
SUBSECTION:	213.03.02 Progress Requirements.
REVISION:	Replace the word "may" with "will" in the second sentence of the third paragraph.
SUBSECTION:	213.03.02 Progress Requirements.
REVISION:	Replace the third sentence of the third paragraph with the following: Additionally, the Department will apply a penalty equal to the liquidated damages when all aspects of the work are not coordinated in an acceptable manner within 5 days after written notification.
SUBSECTION:	214.04 MEASUREMENT.
REVISION:	Replace the second sentence with the following: The Department will not measure fabric when the Contract indicates the fabric is incidental to the work or when the specification for another item requires incidental installation of geotextile fabric.
SUBSECTION:	302.02 MATERIALS.
REVISION:	Add the following: 302.02.03 Mixer. Equip the mixer with a water flow system with a positive cut-off control that will stop the flow of water simultaneously with any stoppage in the flow of aggregate and with valves or other devices that can be easily reset when a change in the rate of flow is desired.
SUBSECTION:	401.02.01 All Asphalt Mixing Plants.
PART:	A)
REVISION:	Replace the first sentence of the second paragraph with the following: Provide a laboratory inspected and qualified according to the Department's Quality Assurance Program for Materials Testing and Acceptance and conforming to the following minimum requirements:
SUBSECTION:	401.02.01 All Asphalt Mixing Plants.
PART:	A)
REVISION:	Replace the fourth paragraph with the following: In addition to the equipment required to perform testing according to the AASHTO standards and Kentucky Methods (KM), equip each laboratory with the following minimum furnishings and equipment, conforming to the applicable specifications, as required for the type of construction specified in the Contract: 1) one workbench, at least 2.5 feet wide by 6 feet long; 2) one desk or table and 2 chairs; 3) a fire extinguisher located near the door; and 4) a first aid kit.

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SUBSECTION:	401.02.01 All Asphalt Mixing Plants.
PART:	Between Items “H” and “I”
REVISION:	Insert the following new item: Recordation. Provide an automatic graphic or digital record of the production quantities according to AASHTO M156.
SUBSECTION:	401.02.01 All Asphalt Mixing Plants.
PART:	I) Thermometers.
REVISION:	Delete the third paragraph.
SUBSECTION:	401.02.04 Special Requirements for Continuous Plants.
PART:	B) Weight Calibration of Asphalt Binder and Aggregate Feed.
REVISION:	Add the following new paragraph: When equipped with aggregate weighing devices (belt scales), calibrate each cold feeder, along with the aggregate weighing devices, according to Subsection 401.02.05 A) and B).
SUBSECTION:	402.03.01 Responsibilities.
PART:	B) Setup.
REVISION:	Replace (MSG) with (G_{nm})
SUBSECTION:	402.03.01 Responsibilities.
REVISION:	Add the following: C) Process Control. After the setup period, perform the process control operations of KM 64-426.
SUBSECTION:	402.03.02 Acceptance.
PART:	A) General.
REVISION:	Add the following: Document and report all acceptance tests on the Asphalt Mixtures Acceptance Workbook (AMAW). Submit the completed AMAW for each lot to the Department within 5 working days after the completion of the lot.
SUBSECTION:	402.03.02 Acceptance.
PART:	C) Setup.
REVISION:	Add the following after the second sentence: For mixtures with a total-project quantity between 500 and 1,000 tons, perform a minimum of one process control test for AC, AV, and VMA, and report the results to the Engineer. Add the following after the seventh sentence: Ensure the adjusted AC remains above the minimums specified in Subsection 403.03.03 C) 2).
SUBSECTION:	402.03.03 Verification.
REVISION:	Replace the first two sentences with the following: For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA for each lot according to the corresponding procedures as given in Subsection 402.03.02. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405.
SUBSECTION:	402.05.02 Asphalt Mixtures and Mixtures with RAP.
PART:	D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.
REVISION:	Replace with the following: The Department will pay as mainline mixture but use a 1.00 pay value for all properties.
SUBSECTION:	402.05.01 Specialty Mixtures.
REVISION:	Add “asphalt mixtures for temporary applications” to the list of defined specialty mixtures.
SUBSECTION:	403.02.05 Release Agent.
REVISION:	Replace with the following: Provide materials conforming to KM 64-422.

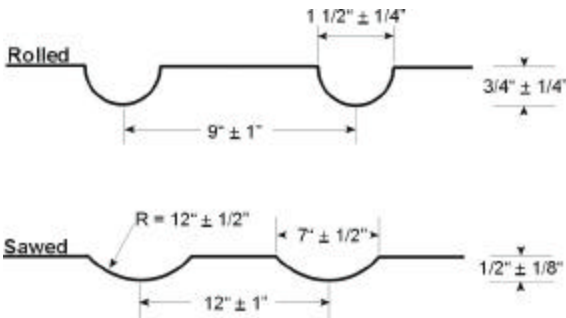
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SUBSECTION:	403.02.06 Transport Equipment.
REVISION:	Add the following after the first sentence: Do not load trucks that are contaminated with an unapproved release agent. When such contamination is identified after loading, reject the load. In either case, remove the truck and respective driver from the project for the duration of the project.
SUBSECTION:	403.02.09 Small Tools and Portable Equipment.
REVISION:	Add the following at the end of the first paragraph: Do not use an unapproved release agent on any small tools or equipment incidental to the paving operation.
SUBSECTION:	403.03.01 Seasonal and Weather Limitations.
REVISION:	Replace "November 15" with "November 30" throughout the Subsection.
SUBSECTION:	403.03.02 Preparation of Base.
REVISION:	Replace the first sentence of the eighth paragraph with the following: Remove existing Type V markers. Fill the recess and any additional damaged area with compacted asphalt mixture within 24 hours of removal.
SUBSECTION:	403.03.03 Preparation of Mixture.
PART:	A) Mixture Composition.
REVISION:	Replace Part A) with the following: A) Mixture Composition. Provide the appropriate mixture composition for the specified asphalt mixture, or substitute a higher aggregate type. When substituting a mixture of a higher ESAL class, provide a mixture of no more than one ESAL class higher than the specified asphalt mixture. Conform to the gradation requirements (control points) of AASHTO MP2 for the Superpave mixture. Unless the Engineer authorizes otherwise in writing, use the same type and source of ingredient aggregates and asphalt binder throughout the entire project for each type of mixture. For asphalt surface courses containing 100 percent polish-resistant coarse aggregate, limit the portion of non-polish-resistant fine aggregate retained on a No. 4 sieve to 5 percent of the total combined aggregates. When using a porous aggregate, increase the asphalt binder content (AC) as needed for asphalt binder absorption by the aggregate. The following aggregate requirements are listed in order of the highest, Type A, to the lowest, Type D: 1) Type A. Provide 100 percent of the coarse aggregate Class A sources. Ensure that 20 percent of the total combined aggregate is Class A polish-resistant fine aggregate. 2) Type B. Select either of the 2 following options: a) Provide 100 percent of the coarse aggregate from Class B sources. b) Provide a combined aggregate, retained on the No. 4 sieve, that is a minimum of 50 percent from any Class A polish-resistant aggregate source except those identified as "Not Permitted as the polish-resistant portion of Class B blends." Submit all Class B blends to the Department for review. For Option a) or b) above, ensure one of the following: • 20 percent or more of the total combined aggregate is Class A polish resistant fine aggregate. • 30 percent or more of the total combined aggregate is Class B polish resistant fine aggregate. • 30 percent or more of the total combined aggregate is a combination of Class A and Class B polish resistant fine aggregate. 3) Type C. Ensure that 40 percent or more of the total combined aggregate is polish-resistant; Class A coarse, fine, or combination. 4) Type D. No restriction on aggregate type.

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SUBSECTION:	403.03.03 Preparation of Mixture.
PART:	B) Moisture Content of Mix
REVISION:	Replace the third sentence with the following: When moisture contents are 0.10 percent or greater, adjust the AC determination made on plant-produced mixture to reflect the actual AC as KM 64-434 directs.
SUBSECTION:	403.03.03 Preparation of Mixture.
PART:	C) Mix Design Criteria.
REVISION:	Replace the first sentence with the following: Conform to the gradation requirements (control points) of AASHTO MP2 for the Superpave mixture type the Contract specifies.
SUBSECTION:	403.03.03 Preparation of Mixture.
PART:	C) Mix Design Criteria.
NUMBER:	1)
REVISION:	Replace the first sentence with the following: Submit a preliminary mix design, completed using a Superpave gyratory compactor (SGC) conforming to AASHTO PP 35. Add the following after the second sentence: The Department will require a dust-to-binder range of 0.8 to 1.6.
SUBSECTION:	403.03.03 Preparation of Mixture.
PART:	C) Mix Design Criteria.
NUMBER:	2) Selection of Optimum AC.
REVISION:	Add the following: Ensure the optimum AC is a minimum of 5.0 percent by weight of the total mixture for all 0.5-inch nominal surface mixtures and 5.3 percent by weight of the total mixture for all 0.38-inch nominal surface mixtures.
SUBSECTION:	403.03.06 Thickness Tolerance.
TABLE:	Nominal Maximum Size of Mixture vs. Thickness Range
REVISION:	Delete

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SUBSECTION: REVISION:	<p>403.03.08 Rumble Strips. Replace with the following:</p> <p>A) Interstates and Parkways. Construct sawed rumble strips on all mainline and ramp shoulders to the dimensions shown below.</p> <p>B) Other Roads. When using a surface mixture instead of Asphalt Mixture for Pavement Wedge, or when the Engineer deems it appropriate to pave the driving lanes and the adjacent shoulder monolithically, provide rolled rumble strips. Construct strips on all main line shoulders to the dimensions shown below. When furnishing Asphalt Mixture for Pavement Wedge, binder, or a base mixture for shoulders, the Department will not require rumble strips.</p> <p>Time the rolling operation so indentations are at the specified size and depth without causing unacceptable displacement of the asphalt mat. Correct unacceptable rolled-in rumble strips by sawing.</p> <p>On shoulders less than 3 feet, shorten the length and distance of the strips as the Engineer directs.</p> <p>If preferred, construct the rumble strips by sawing as specified for Interstates and Parkways.</p> <p style="text-align: center;"><u>RUMBLE STRIP DIMENSIONS</u></p>  <p style="text-align: center;">Distance from the edge of the mainline pavement to the end of the strip: 1 foot Length of strips: Rolled 2 feet, Sawed 16 inches</p>
SUBSECTION: PART: REVISION:	<p>403.03.09 Leveling and Wedging, and Scratch Course. A) Leveling and Wedging. Replace the first sentence with the following:</p> <p style="padding-left: 40px;">Conform to the gradation requirements (control points) for base, binder, or surface as applicable.</p>
SUBSECTION: PART: REVISION:	<p>403.03.09 Leveling and Wedging, and Scratch Course. B) Scratch Course. Replace the second sentence with the following:</p> <p style="padding-left: 40px;">Conform to the gradation requirements (control points) for base, binder, or surface as the Engineer directs.</p>
SUBSECTION: REVISION:	<p>403.04.03 Asphalt Mixtures. Add the following:</p> <p style="padding-left: 40px;">The Department will not measure rumble strips for payment and will consider them incidental to this bid item.</p>

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SECTION:	404 OPEN-GRADED FRICTION COURSE
TABLE:	LOT PAY ADJUSTMENT SCHEDULE FOR SPECIALTY MIXTURES
REVISION:	Replace the table with the following table:

LOT PAY ADJUSTMENT SCHEDULE FOR SPECIALTY MIXTURES (TEST DEVIATION FROM JMF)		
	Pay Value	Deviation From JMF (%)
Asphalt Binder Content	1.00	0.0-0.5
	0.98	0.6
	0.95	----
	0.90	0.7
	0.85	0.8
	0.75	≥ 0.9
1 1/2 inch Sieve	1.00	0-13
	0.98	14
	0.95	15-16
	0.90	17-20
	0.85	21-23
	0.75	≥ 24
1 inch, 3/4 inch, and 1/2 inch Sieves	1.00	0-9
	0.98	10
	0.95	11-12
	0.90	13-14
	0.85	15-16
	0.75	≥ 17
3/8 inch, No. 4, No. 8, No. 16, and No. 30 Sieves	1.00	0-8
	0.98	9
	0.95	10
	0.90	11-12
	0.85	13-14
	0.75	≥ 15
No. 50 Sieve	1.00	0-6
	0.98	7
	0.95	8
	0.90	9
	0.85	10
	0.75	≥ 11
No. 100 Sieve	1.00	0-3
	0.98	----
	0.95	4
	0.90	5
	0.85	----
	0.75	≥ 6
No. 200 Sieve	1.00	0.0-2.0
	0.98	2.5
	0.95	3.0
	0.90	----
	0.85	3.5
	0.75	≥ 4.0
Fineness Modulus	1.00	0.0-0.30
	0.98	0.31-0.34
	0.95	0.35-0.39
	0.90	0.40-0.46
	0.85	0.47-0.55
	0.75	≥ 0.56

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SUBSECTION:	406.02.01 Tack Coat.																			
REVISION:	Replace with the following: Furnish any of the following asphalt materials conforming to 806: SS-1, SS-1h, or RS-1.																			
SUBSECTION:	406.02.03 Curing Seal.																			
REVISION:	Replace with the following: Furnish any of the following asphalt materials conforming to 806: RS-1, RS-2, SS-1, SS-1h, or Primer L.																			
SUBSECTION:	406.03.03 Application.																			
REVISION:	Replace the temperature table with the following: Primer L 60-120 °F SS-1, SS-1h 70-160 °F RS-1, RS-2 70-140 °F																			
SUBSECTION:	406.03.03 Application.																			
PART:	B) Asphalt Tack Coat.																			
REVISION:	Replace the second paragraph with the following: When furnishing RS-1 for tack, apply it undiluted. Replace the first sentence of the third paragraph with the following: When furnishing SS-1 or SS-1h for tack, the Department will allow diluted or undiluted application provided uniform and complete coverage is achieved.																			
SUBSECTION:	407.02.02 Aggregate.																			
REVISION:	Change Sieve Size No. 30 to read Sieve Size No. 50.																			
SUBSECTION:	408.04.02 Mobilization for Asphalt Pavement Milling and Texturing.																			
REVISION:	Add the following: For group contracts, the Department will measure the quantity for each project (subsection) that has a bid item for Mobilization for Asphalt Pavement Milling and Texturing.																			
SUBSECTION:	409.02 MATERIALS AND EQUIPMENT.																			
REVISION:	Replace “KM 64-427” with the following: the guidelines in Subsection 409.03.02																			
SUBSECTION:	409.03.01 Restrictions.																			
REVISION:	Add the following sentence: When the mixture’s bid item specifies PG 76-22, limit RAP content to 20 percent or less.																			
SUBSECTION:	409.03.02 Preparation of Mixture.																			
PART:	A) Mix Requirements.																			
REVISION:	Void the Revision and replace with the following: Conform to the Contract requirements for each mixture produced using RAP. If mixtures produced using RAP do not conform to the requirements for that mixture, complete the project using all virgin materials at no additional expense to the Department. Conform to the following table to select the appropriate grade of virgin asphalt binder to blend with the RAP:																			
<table><tr><th rowspan="2">Mixture’s Bid Item</th><th colspan="3">Appropriate Virgin Asphalt Binder</th></tr><tr><th>0-20% RAP</th><th>21-30% RAP</th><th>>30% RAP</th></tr><tr><td>PG 76-22</td><td>PG 76-22</td><td>-</td><td>-</td></tr><tr><td>PG 70-22</td><td>PG 70-22</td><td>PG 64-22</td><td>*</td></tr><tr><td>PG 64-22</td><td>PG 64-22</td><td>PG 64-22</td><td>*</td></tr></table> <p style="text-align: center;">* Select according to KM 64-427</p>		Mixture’s Bid Item	Appropriate Virgin Asphalt Binder			0-20% RAP	21-30% RAP	>30% RAP	PG 76-22	PG 76-22	-	-	PG 70-22	PG 70-22	PG 64-22	*	PG 64-22	PG 64-22	PG 64-22	*
Mixture’s Bid Item	Appropriate Virgin Asphalt Binder																			
	0-20% RAP	21-30% RAP	>30% RAP																	
PG 76-22	PG 76-22	-	-																	
PG 70-22	PG 70-22	PG 64-22	*																	
PG 64-22	PG 64-22	PG 64-22	*																	

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SUBSECTION:	410.05 PAYMENT.
REVISION:	Replace the RIDE QUALITY ADJUSTMENT SCHEDULE with the following 2 schedules:
RIDE QUALITY ADJUSTMENT SCHEDULE FOR ROADS POSTED GREATER THAN 45 MPH	
IRI	Pay Value⁽¹⁾
36 or lower	+0.15
37 to 46	= 0.015 x (47 – IRI)
47 to 66	0.00
67 to 76	= 0.015 x (67 – IRI)
77 or higher	Corrective work or replacement required
RIDE QUALITY ADJUSTMENT SCHEDULE FOR ROADS POSTED 45 MPH OR LESS	
Rideability Index	Pay Value⁽¹⁾
36 or lower	+0.15
37 to 46	= 0.015 x (47 – IRI)
47 to 85	0.00
86 or higher	Corrective work or replacement required
<i>⁽¹⁾ The Department will not apply a positive pay value for corrective work other than removal and replacement to achieve the IRI.</i>	
SUBSECTION:	501.03.13 Finishing.
PART:	H) Texturing.
REVISION:	Replace the third paragraph with the following:
	Form transverse grooves in the concrete with a width between 0.09 inch and 0.13 inch and a depth between 0.12 inch and 0.19 inch. Space the grooves at random intervals between 0.4 inch to 1.5 inches with no more than 50 percent of the spacing being one inch or greater.
SUBSECTION:	502.03 CONSTRUCTION.
PART:	D) Strength Testing and Opening to Traffic.
NUMBER:	1) Cylinders.
REVISION:	Replace the first sentence with the following:
	The Department will cast, cure, and test 3 sets from each 150 cubic yards of concrete.
SUBSECTION:	503.03.09 Ride Quality.
REVISION:	Replace item 4) with the following:
	Achieve an IRI of 63 or less for each traffic lane with no individual one-mile section having an IRI of greater than 76.
SUBSECTION:	506.03.01 Header Curb, Valley Gutter, and Curb and Gutter (Combination).
REVISION:	In the second sentence of the third paragraph replace the Subsection reference 601.03.12 with 501.02.10. In the second sentence of the sixth paragraph replace the Subsection reference 601.03.16 with 501.03.17 D).
SUBSECTION:	508.03.03 Precast Construction.
REVISION:	Replace "Subsection 605.03" in the first sentence with Section 605.
SUBSECTION:	509.03 CONSTRUCTION.
REVISION:	Replace "Subsection 605.03" in the first sentence with Section 605.
SUBSECTION:	601.02.13 Forms.
PART:	F) Stay-In-Place Metal Forms.
NUMBER:	1) Forms and Supports.
REVISION:	Replace ASTM A 446 with ASTM A 653. Replace ASTM A 525 with ASTM A 924.

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SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	A) Concrete.
TABLE:	INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE
REVISION:	Add the following foot note to AA Slump: <i>The Department may allow the slump of AA concrete to be increased up to a 6 inch maximum, provided the w/c ratio does not exceed 0.40 and a high range water reducer (Type F or G) is used. Trial Batches will be required if producer has not previously supplied.</i>
SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	A) Concrete.
TABLE:	INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE
REVISION:	Replace note 11 with the following: <i>Compressive Strength Testing, Opening to Traffic and Acceptance Requirements for Class M1 and Class M2. Test one set of cylinders at 24 ± 0.5 hours from the time of molding, and allow the resulting average strength to dictate one of the following actions:</i> <i>(a) If the average compressive strength is 3,500 psi or above, open to traffic, and test the remaining set of cylinders at an age of 7 days or 28 days.</i> <i>(b) If the average compressive strength is between 3,000 and 3,500 psi, open to traffic, and test the remaining set of cylinders at $48 \pm$ one hour.</i> <i>(c) If the average compressive strength is less than 3,000 psi, protect the item as directed or approved. Test the remaining set of cylinders at $48 \pm$ one hour.</i> <i>If the average strength of the cylinders tested at $48 \pm$ one hour is 3,500 psi or above, the Engineer will consider the concrete acceptable. If the average strength is below 3,500 psi, take 2 cores from the concrete and test at an age of 7 days. If the average strength of the cores tested at 7 days is 4,000 psi, the Engineer will consider the concrete acceptable.</i> <i>When 2 consecutive first sets of cylinders or when 2 first sets out of any 4 first sets of cylinders do not reach 3,500 psi, compressive strength, the Engineer will suspend the work. Resume work when the Engineer approves the adjusted mix design.</i> <i>Cast 2 sets of cylinders from the concrete used for each placement.</i> <i>Cast the cylinders after tests verify that the concrete conforms to slump and air content requirements. Make and cure the cylinders according to the procedures outlined in KM 64-305. Department personnel will test the mixture and cast cylinders.</i>
SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	C) Mixtures Using Type IP, IS and I(SM) Cement or Mineral Admixtures.
NUMBER:	2) Mineral Admixtures.
REVISION:	Add the following after the first sentence: Reduction of the total cement content by a combination of any mineral admixtures will be allowed, up to a maximum of 30 percent.
SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	C) Mixtures Using Type IP Cement or Mineral Admixtures.
NUMBER:	2) Mineral Admixtures.
LETTER:	b) Ground Granulated Blast Furnace Slag (GGBF Slag).
REVISION:	Replace the first sentence with the following: When added as a separate ingredient, use Grade 120 GGBF or 100 GGBF slag to reduce the quantity of cement, except do not use GGBF slag to reduce the quantity of Type IS or I(SM) cement.
SUBSECTION:	601.03.04 Classes and Primary Uses.
PART:	P) Non-Shrink Grout.
REVISION:	Replace with the following: Bonding and sealing for post-tensioning, tie-back rods and bolts, and box beams.

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SUBSECTION:	601.03.09 Placing Concrete.
PART:	A) General.
REVISION:	Add the following to the fifth paragraph: When pumping, equip the delivery pipe with a nozzle, having a minimum of 2 right angles, at the discharge end.
SUBSECTION:	601.03.09 Placing Concrete.
PART:	D) Weather Limitations.
REVISION:	Replace the first sentence of the second paragraph with the following: Maintain the temperature of the mixture at or below 90 °F during placement. Unless the Engineer determines that safety concerns or other considerations prohibit a shutdown, cease concrete production when the mixture exceeds 90 °F until adequate methods are in place to reduce or maintain the mixture temperature.
SUBSECTION:	601.03.15 Opening to Traffic.
TABLE:	Required Time in Calendar Days Before Applying Significant Loads on Concrete Structures
REVISION:	Change the title of the seventh item to the following: Caps on Concrete Pile Bents, Open Column Abutments, and Piers
SUBSECTION:	606.02.09 Structural Steel.
REVISION:	Replace the subsection reference of “811” with “812”
SUBSECTION:	606.02 MATERIALS AND EQUIPMENT.
REVISION:	Add the following subsection: 606.02.11 Coarse Aggregate. Conform to Section 805, size 9-M.
SUBSECTION:	607.03.05 Bolted Connections Using High-Strength Steel Bolts.
PART:	B) Direct Tension Indicators.
REVISION:	Replace the first two sentences of the third paragraph with the following: Under normal conditions, install the tension indicator under the non-turned element of the fastening system. Obtain the Engineer’s permission before installing tension indicators under the turned element. If the Engineer determines that it is necessary to install the tension indicator under the turned element, install additional hardened washers according to the manufacturer’s instructions. Add the following to the end of the fourth paragraph: The fastener assembly may also need to be replaced.
SUBSECTION:	607.03.08 Planing and Finishing.
PART:	B) Flame Cutting.
REVISION:	Replace the first sentence of the second paragraph with the following: Remove roughness exceeding these values and occasional notches or gouges no more than 3/16 inch deep, on otherwise satisfactory surfaces, by machining or grinding.

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SUBSECTION:	607.03.23 Cleaning and Painting.
PART:	D) Preparation for Field Coatings.
REVISION:	Replace the second and third paragraphs with the following: After erection, including all bolting and remedial work, prepare the shop applied zinc coating for field applied intermediate coating as follows. Remove all grease, oil or other lubricants from all surfaces to be painted including lubricant or residuals from the surfaces of all galvanized nuts, bolts and washers by solvent cleaning according to SSPC SP 1. When dry overspray from the shop applied zinc coating exists, remove by sanding. High pressure water wash all structural steel at 4,500 to 5,000 psi. using clean potable water. As needed, use a non-sudsing, bio-degradable detergent to remove all surface contaminants not removed by high pressure water washing. Rinse all areas where a detergent and/or solvent was applied by pressure washing with clean potable water. Blast clean all surfaces sustaining damage to the shop applied zinc coating to the pictorial standards described in subsection B. Apply a field coat of approved zinc rich coating to all areas not possessing an acceptable shop applied zinc coating. Completely remove all rust, scale and other foreign material before applying the intermediate coating. When application of the finish coat exceeds the recoat window of the intermediate coat, abrade the surface of the intermediate coat according to the coating manufacturer's recommendations before applying the finish coat.
SUBSECTION:	607.03.23 Cleaning and Painting.
PART:	E) Application of Field Coatings.
REVISION:	Replace the second paragraph with the following: Apply paint only to clean and dry surfaces when the ambient air temperature is 40 °F or greater, the surface temperature of the steel members to be painted is at least 5 °F above the dew point, and the relative humidity is less than 90 percent. Do not apply paint to damp or frosted surfaces, nor during any period of rainfall. Replace the fifth paragraph with the following: Paint from the top of the structure toward the bottom, and proceed by sections, bays, or parts of the work, unless the Contract or Engineer directs otherwise.
SUBSECTION:	611.02.01 Concrete.
REVISION:	Replace the first sentence with the following: Conform to ASTM C 1433.
SUBSECTION:	611.03.01 Transportation and Handling.
REVISION:	Replace the first sentence with the following: Handle and store the precast units so that flexural stresses are not induced until the concrete age is 7 days or attains a compressive strength of 3,000 psi.
SUBSECTION:	611.03.02 Precast Unit Construction.
REVISION:	Add the following: 4) Contrary to ASTM C 1433 Section 10.3, assure the compressive strength of the cores tested are equal to or greater than the design strength.
SUBSECTION:	611.03.07 Joints.
PART:	A) Rubber Gaskets.
REVISION:	Replace the title with the following: A) Butyl Rubber Sealant.
SUBSECTION:	611.03.07 Joints.
PART:	B) Flexible Plastic Gaskets.
REVISION:	Replace the title with the following: B) Rubber Gaskets.

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SUBSECTION:	613.05 PAYMENT.
REVISION:	Replace 8160 Structure Excavation with the following: 2203 Structure Excavation Unclassified
SUBSECTION:	614.02.01 Paint.
REVISION:	Add the following: Furnish a paint system in which all coats are produced by the same manufacturer and use the same system throughout the entire project.
SUBSECTION:	614.03.06 Paint Application.
REVISION:	Replace the first sentence of the fourth paragraph with the following: Paint from the top of the structure toward the bottom, and proceed by sections, bays, or parts of the work, unless the Contract or Engineer directs otherwise.
SUBSECTION:	701.02.03 Joint Materials.
PART:	D) Flexible Plastic Gaskets.
REVISION:	Replace with the following: D) Butyl Rubber Sealants. Conform to Section 807.
SUBSECTION:	701.02.04 Bedding Materials.
REVISION:	Replace the first sentence with the following: Use No. 8 aggregate, No. 9 aggregate, or a fine aggregate conforming to Subsection 804.08 for bedding material.
SUBSECTION:	701.02.04 Bedding Materials.
TABLE:	A1, A2, and A3 Characteristics
REVISION:	Under A3, replace "51 max" with "51 min"
SUBSECTION:	702.03.05 Joints.
PART:	A) Reinforced Concrete Pipe.
NUMBER:	2) Rubber Gaskets.
REVISION:	Replace with the following: In addition to the requirements of Subsection 701.02, use a pipe section conforming to AASHTO M 315. Use the gasket manufacturer's recommended cement and lubricant. Snugly fit the rubber gasket in the beveled surface of the tongue and groove ends of the sections to form a flexible seal under all conditions of service.
SUBSECTION:	701.03.05 Joints.
PART:	B) Corrugated Metal Pipe.
REVISION:	Void the Revision and replace with the following: Construct joints using a band with annular corrugations and a bolt, bar and strap connection. Use a minimum nominal band width of 12 inches for all pipe diameters 54 inches and smaller. Use a two-piece band with a minimum nominal width of 20 inches for all pipe diameters greater than 54 inches. Manufacture the band from the same base materials as the pipe. The pipe bands may be up to two gauges lighter than the pipe it is joining, with a minimum gauge thickness of 16. The Department may allow dimple band connections for field cut pipe. Install the connecting bands according to the manufacturer's written recommendations.
SUBSECTION:	703.02.09 Geotextile Fabric.
REVISION:	Replace Section reference 845 with 843.
SUBSECTION:	703.04.08 Geotextile Fabric.
REVISION:	Add the subsection: 703.04.08 Geotextile Fabric. The Department will measure the quantity according to Subsection 214.04.
SUBSECTION:	710.02 MATERIALS.
REVISION:	Add the following Subsection: 710.02.15 High Density Polyethylene (HDPE) Adjusting Rings. Conform to Section 846.

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SUBSECTION:	710.03.01 Newly Constructed Small Drainage Structures.
PART:	A) General.
REVISION:	Replace the last sentence of the sixth paragraph with the following: Use precast concrete, precast concrete pipe sections, cast-in-place, brick, or HDPE adjusting rings for adjustment of existing manholes according to the Standard Specifications.
SUBSECTION:	710.03.01 Newly Constructed Small Drainage Structures.
PART:	B) Precast Structures Except Manholes.
REVISION:	Replace the first two sentences with the following: Only furnish products manufactured by a precast producer listed in the Department's List of Approved Materials. If the producer does not have an approved drawing for the product, submit 5 copies of shop drawings to the Engineer for review and approval.
SUBSECTION:	710.03.03 Adjusted Small Drainage Structures.
REVISION:	Add the following sentence to the end of the first paragraph: For HDPE adjusting rings, install and seal according to the manufacturer's recommendations.
SUBSECTION:	712.03.02 Type V Markers.
REVISION:	Replace the first sentence of the first paragraph with the following: Install Type V Markers in slots cut into the pavement according to the manufacturer's recommendations. Delete the last paragraph.
SUBSECTION:	713.02.02 Drop on Glass Beads.
REVISION:	Replace with the following: Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.
SECTION:	713 PERMANENT PAVEMENT STRIPING.
REVISION:	Add the following subsection: 713.03.06 Acceptance of Non-Specification Markings. If weather conditions allow, perform corrective work to bring striping retroreflectivity into conformance. If corrective work has been performed and the work meets all requirements except for minimum retroreflectivity, the Department may accept the work according to Subsection 105.04. When the Engineer determines that the markings may be left in place, the Department will accept them at a reduction in the Contract unit bid price according to the Acceptance Pay Schedule. Additionally, the Engineer may remove the striping crew for the remainder of the project according to Subsection 108.06 Part A). The Engineer may also apply this section when corrective work cannot be performed due to weather. Acceptance Pay Schedule – White 156 to 174 mcd/lux/square meter – 50% pay 138 to 155 mcd/lux/square meter – 25% pay 120 to 137 mcd/lux/square meter – 0% pay < 120 mcd/lux/square meter – unacceptable Acceptance Pay Schedule – Yellow 126 to 149 mcd/lux/square meter – 50% pay 103 to 125 mcd/lux/square meter – 25% pay 80 to 102 mcd/lux/square meter – 0% pay < 80 mcd/lux/square meter – unacceptable

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SUBSECTION:	713.03 CONSTRUCTION.
REVISION:	Replace the MUTCD references to "Part III" with "Part 3"
SUBSECTION:	714.02.03 Binder.
REVISION:	Replace the last sentence with the following: Submit the material and method of application to the Engineer and obtain written approval from the Engineer and the manufacturer of the pavement marking material before applying.
SUBSECTION:	714.02.04 Drop on Glass Beads.
REVISION:	Replace with the following: Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.
SUBSECTION:	714.03 CONSTRUCTION.
REVISION:	Replace the MUTCD references to "Part III" with "Part 3" and figure references to "3-11 and 3-12" with "3B-8 and 3B-9"
SUBSECTION:	714.03.01 Layout.
REVISION:	Replace the MUTCD reference to "Part III" with "Part 3"
SUBSECTION:	714.03.03 Application.
PART:	A) Type I Tape.
REVISION:	Add the following: When applied to concrete, cut the tape at all joints.
SUBSECTION:	714.03.04 Restrictions.
REVISION:	Replace the first paragraph with the following: Do not apply the pavement marking material when air and pavement temperatures are below 50 °F. Delete the third paragraph.
SUBSECTION:	714.03.06 Proving Period for Durable Markings.
PART:	A) Requirements.
NUMBER:	1) Type I Tape.
REVISION:	Add the following: Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no sign of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.
SUBSECTION:	714.03.06 Proving Period for Durable Markings.
PART:	A) Requirements.
NUMBER:	2) Thermoplastic.
REVISION:	Replace the first sentence of the second paragraph with the following: The minimum retroreflectivity requirements at the end of the proving period, as measured with a LTL 2000, LTL 2000Y, or Department approved 30M geometry mobile instrument are as follows: Replace the first sentence of the third paragraph with the following: The Department will take these measurements between 150 and 210 days after the start of the proving period, basing acceptance on KM 202 for LTL 2000 readings and KM 203 for mobile readings.
SUBSECTION:	714.05 PAYMENT.
REVISION:	Replace with the following: The Department will make payment upon completion of the work. If after the proving period the markings do not meet minimum retroreflectivity requirements, the Department will adjust the payment or require corrective work according to the following:

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SUBSECTION:	717.02.04 Drop on Glass Beads.
REVISION:	Replace with the following: Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.
SECTION:	804.03 Concrete.
REVISION:	Replace the last sentence with the following: The Department will waive the requirements for gradation, sand equivalent, and uncompacted voids for concrete pipe.
SUBSECTION:	804.04.04 Requirements for Combined Aggregates.
PART:	B) Sand Equivalent.
REVISION:	Replace the third paragraph with the following: The Department may waive the sand equivalent requirement provided the portion of the combined aggregate passing the No. 40 sieve is non-plastic according to AASHTO T 90.
SUBSECTION:	804.04.04 Requirements for Combined Aggregates KM.
TABLE:	Superpave Fine Aggregate Consensus Property Requirements.
REVISION:	For ESAL Class 1, Replace both dashes with 40.
SUBSECTION:	805.03.01 Soundness and Shale.
PART:	AGGREGATE USE/Portland Cement Concrete Mixtures.
REVISION:	Replace the title use "Class AA, Class S and Bridge Deck Overlays" with "Aggregate for Bridge Decks, Bridge Deck Overlays, and Bridge Barrier Walls"
SECTION:	805 COARSE AGGREGATES.
TABLE:	Sizes of Coarse Aggregates.
REVISION:	Replace KM 64-420 in footnote (1) with KM 64-620.
SECTION:	805 COARSE AGGREGATES.
TABLE:	Aggregates Size Use.
REVISION:	For Cement Concrete Structures and Incidental Construction add 9-M for Overlays to the sizes to be used column.
SUBSECTION:	805.03.03 Gradation.
REVISION:	Replace the last sentence with the following: The Department will allow blending of same source/same type aggregate to achieve designated sizes when precise procedures are used such as cold feeds, belts, weigh hoppers, or equivalent.
SUBSECTION:	805.03.04 Erodible or Unstable Material.
REVISION:	Add the subsection: 805.03.04 Erodible or Unstable Material. Treat as applicable. The Department considers Size No. 57 or larger aggregate, except crushed or uncrushed gravel, non-erodible. The Department considers the following materials to be erodible or unstable: 1) Friable sandstone. The Engineer determines when sandstone is friable or non-friable. 2) Crushed or uncrushed gravel, any size. 3) Crushed coarse aggregate smaller than Size No. 57. 4) Any material with 50 percent or more passing the No. 4 sieve.
SUBSECTION:	805.04 CONCRETE.
REVISION:	Replace the second paragraph with the following: The Department will waive the requirements for gradation and finer than No. 200 for concrete pipe.
SUBSECTION:	805.10 GRANULAR EMBANKMENT.
REVISION:	Replace "2 ½-inch" with "12-inch".
SUBSECTION:	805.10 GRANULAR EMBANKMENT.
PART:	1)
REVISION:	Replace with the following: 1) Engineer approved shot limestone or sandstone from roadway excavation, borrow excavation, or another approved source.

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SUBSECTION:	805.11 STRUCTURE GRANULAR BACKFILL.																			
REVISION:	Replace with the following: Provide crushed or uncrushed aggregate meeting the quality requirements of this section. When the material includes a significant amount of individual fragments greater than 1 ½ inches, the Engineer may visually accept the minus No. 200 portion. Conform to the following gradation: <table><tr><td><u>Sieve Size</u></td><td><u>Percent Passing</u></td></tr><tr><td>4 inch</td><td>100</td></tr><tr><td>No. 4</td><td>0-10</td></tr><tr><td>No. 200</td><td>0-5</td></tr></table>	<u>Sieve Size</u>	<u>Percent Passing</u>	4 inch	100	No. 4	0-10	No. 200	0-5											
<u>Sieve Size</u>	<u>Percent Passing</u>																			
4 inch	100																			
No. 4	0-10																			
No. 200	0-5																			
SUBSECTION:	805.13.03 Channel Lining, Class IA.																			
REVISION:	Replace the first sentence with the following: Provide crushed stone meeting the general requirements of this section.																			
SUBSECTION:	805.13.04 Channel Lining, Class II.																			
REVISION:	Replace the first sentence with the following: Provide crushed stone meeting the general requirements of this section.																			
SUBSECTION:	805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.																			
TABLE:	GRADATION – COARSE AGGREGATES FOR UNDERDRAINS																			
REVISION:	Replace “No. 200” sieve with “No. 100”.																			
SUBSECTION:	810.03.04 Extra Protection																			
REVISION:	Replace “mm” in the second sentence of the second paragraph with “inches”.																			
SECTION:	810.03 REINFORCED CONCRETE PIPE.																			
REVISION:	Add new subsection: 810.03.07 Concrete. Submit Concrete Mix Design to the Central Office Materials.																			
SECTION:	812.01.01 Structural Steel, All Types.																			
REVISION:	Replace second sentence with the following: When the supplementary requirement of this specification are specified, they exceed the requirements of ASTM A 36, A 514, A 572, A 588, and ASTM A 852.																			
SUBSECTION:	812.01.01 Structural Steel, All Types.																			
PART:	A) Structural Steel.																			
REVISION:	Delete AASHTO M 183.																			
SUBSECTION:	812.01.01 Structural Steel, All Types.																			
PART:	B) High-Strength Low-Alloy Columbium-Vandium Steels of Structural Quality.																			
REVISION:	Delete AASHTO M 223.																			
SUBSECTION:	812.01.01 Structural Steel, All Types.																			
PART:	C) High-Strength Low-Alloy Structural Steel with 345 Mpa Minimum Yield Point to 4 Inches Thick.																			
REVISION:	Delete AASHTO M 222.																			
SUBSECTION:	812.01.01 Structural Steel, All Types.																			
PART:	E) High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding.																			
REVISION:	Delete AASHTO M 244.																			
SECTION:	813.08.05 Aluminum Alloy Rolled or Extruded Shapes.																			
REVISION:	Replace “T-4 AND T6” with “T6”.																			
SUBSECTION:	813.09.02 High-Strength Steel Bolts, Nuts, and Washers.																			
PART:	A) Bolts.																			
REVISION:	<table><tr><td colspan="5">HARDNESS NUMBER</td></tr><tr><td rowspan="2">Bolt Size (in)</td><td colspan="2">Brinell</td><td colspan="2">Rockwell C</td></tr><tr><td>Min</td><td>Max</td><td>Min</td><td>Max</td></tr><tr><td>½ - 1</td><td>253</td><td>319</td><td>25</td><td>34</td></tr></table>	HARDNESS NUMBER					Bolt Size (in)	Brinell		Rockwell C		Min	Max	Min	Max	½ - 1	253	319	25	34
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Bolt Size (in)	Brinell		Rockwell C																	
	Min	Max	Min	Max																
½ - 1	253	319	25	34																
SUBSECTION:	813.13 MATTRESSES AND GABIONS.																			
REVISION:	Replace the first sentence of the first paragraph with the following: Conform to ASTM A 975, Style 1 or ASTM A 974, Style 1 or 2.																			

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2000 Edition
(Effective with the June 27, 2003 Letting)**

SUBSECTION:	814.04.01 Steel Guardrail Posts.																												
REVISION:	Replace AASHTO M 183 in the first sentence with ASTM A 36.																												
SUBSECTION:	814.05.02 Composite Plastic.																												
REVISION:	Add the following sentence to the first paragraph: Rubber is an acceptable alternate to plastic in their composition.																												
SUBSECTION:	814.06 MATERIALS FOR END TREATMENTS.																												
PART:	D) Steel Sheet (for rail plates and mounting brackets).																												
REVISION:	Replace 570, Grade D with the 1011, Type SS, Grade 36.																												
SUBSECTION:	816.02 GENERAL.																												
REVISION:	Replace ASTM D 2521 with ASTM A 239.																												
SUBSECTION:	816.02.02 Aluminum-Coated Steel.																												
REVISION:	Replace 0.01 with 0.099.																												
SUBSECTION:	819.01.01 Steel Plates.																												
REVISION:	Replace "Paragraph 14" in the second sentence of the second paragraph with "Table 6".																												
SUBSECTION:	821.03 SAMPLING AND TESTING.																												
REVISION:	In the third sentence of the first paragraph, replace calendar days with working days.																												
SUBSECTION:	827.04 PERMANENT SEED.																												
REVISION:	Replace with the following: Conform to the requirements outlined in the "Kentucky Seed Law and Provisions for Seed Certification in Kentucky" and the "Regulations under the Kentucky Seed Law", with following exceptions: <ol style="list-style-type: none"> 1. Obtain seed only through registered dealers that are permitted for labeling of seed. 2. Ensure all deliveries/shipments of premixed seed are accompanied with a master blend sheet. 3. The Department may sample the seed at the job site at any time. 4. Ensure all bags and containers have an acceptable seed tag attached. <p>Do not use seed (grasses, native grasses and legumes) if the weed seed is over 2%, total germination (including hard seed) is less than 60%, if the seed test date is over 9 months old exclusive of the month tested, or if the limits of noxious weed seed is exceeded.</p> <p>Ensure that noxious weed seeds contained in any seed or seed mixture does not exceed the maximum permitted rate of occurrence per pound.</p> <table> <thead> <tr> <th><u>Name of Kind</u></th><th><u>Max. No. Seeds (per pound)*</u></th></tr> </thead> <tbody> <tr> <td>Balloon Vine (Cardiospermum Halicacabum)</td><td>0</td></tr> <tr> <td>Purple Moonflower (Ipomoea turbinata)</td><td>0</td></tr> <tr> <td>Canada Thistle (Cirsium Arvense)</td><td>0</td></tr> <tr> <td>Johnsongrass (Sorghum Halepense and Sorghum Almum and perennial rhizomatous derivatives of these species)</td><td>0</td></tr> <tr> <td>Quackgrass (Elytrigia Repens)</td><td>0</td></tr> <tr> <td>Annual Bluegrass (Poa Annua)</td><td>256</td></tr> <tr> <td>Buckhorn Plantain (Plantago lanceolata)</td><td>304</td></tr> <tr> <td>Corncockle (Agrostemma Githago)</td><td>192</td></tr> <tr> <td>Dodder (Cuscuta spp.)</td><td>192</td></tr> <tr> <td>Giant Foxtail (Setaria Faberii)</td><td>192</td></tr> <tr> <td>Oxeye Daisy (Chrysanthemum leucanthemum)</td><td>256</td></tr> <tr> <td>Sorrel (Rumex Acetosella)</td><td>256</td></tr> <tr> <td>Wild Onion and Wild Garlic (Allium spp.)</td><td>96</td></tr> </tbody> </table> <p>* Seed or seed mixtures that contain in excess of 480 total noxious seeds per pound is prohibited Wildflower seed shall not be planted until approved by the MCL.</p>	<u>Name of Kind</u>	<u>Max. No. Seeds (per pound)*</u>	Balloon Vine (Cardiospermum Halicacabum)	0	Purple Moonflower (Ipomoea turbinata)	0	Canada Thistle (Cirsium Arvense)	0	Johnsongrass (Sorghum Halepense and Sorghum Almum and perennial rhizomatous derivatives of these species)	0	Quackgrass (Elytrigia Repens)	0	Annual Bluegrass (Poa Annua)	256	Buckhorn Plantain (Plantago lanceolata)	304	Corncockle (Agrostemma Githago)	192	Dodder (Cuscuta spp.)	192	Giant Foxtail (Setaria Faberii)	192	Oxeye Daisy (Chrysanthemum leucanthemum)	256	Sorrel (Rumex Acetosella)	256	Wild Onion and Wild Garlic (Allium spp.)	96
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SUBSECTION:	832.02 TYPE I POSTS.																												
REVISION:	Replace ASTM A 570 with ASTM A 1011.																												

**Supplemental Specifications to The Standard Specifications
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(Effective with the June 27, 2003 Letting)**

SECTION:	840 RAISED PAVEMENT MARKERS								
REVISION:	Replace the section with the following:								
	<p>840.01 TYPE IV MARKERS. Provide markers from the Department's List of Approved Materials. Type IV markers are replacement lenses for use in Type V marker castings.</p> <p>840.02 TYPE V MARKERS. Provide markers from the Department's List of Approved Materials. Type V markers consist of an iron casting with a Type IV marker (mono or bi-directional) attached.</p> <p>840.03 TYPE IVA MARKERS. Provide markers from the Department's List of Approved Materials. Type IVA markers are surface mounted lenses for temporary use in work zones.</p> <p>840.04 SAMPLING. Obtain a manufacturer's certification for each shipment. Include with each shipment of adhesive a written statement from the manufacturer certifying that it conforms to the recommendations of the marker manufacturer, and stating the minimum temperature the adhesive can be satisfactorily mixed and applied.</p> <p>840.05 PACKAGING. Suitably and substantially package all materials with the name and address of the manufacturer and vendor, contract or purchase number, kind of material, trade name, and net contents plainly marked on each package.</p>								
SUBSECTION:	843.01.01 Geotextile Fabric.								
REVISION:	Add the following sentence to the first paragraph:								
	Use circular-knit geotextile conforming to ASTM D 6707 for perforated pipe socks.								
	Add the following sentence to the third paragraph:								
	The manufacturer must participate in the National Transportation Product Evaluation Program (NTEP) for Geotextiles and Geosynthetics.								
SUBSECTION:	843.01.01 Geotextile Fabric.								
PART:	C) Acceptance.								
REVISION:	Delete the burst strength requirement from each table.								
SUBSECTION:	845.02.03 Wrapping.								
REVISION:	Replace Section 845 with Section 843, Type II.								
SECTION:	846 HIGH DENSITY POLYETHYLENE (HDPE) ADJUSTING RINGS								
REVISION:	Add New Section:								
	<p>846.01 RESIN. Use a recycled polyethylene plastic or virgin resin producing a molded part meeting the following requirements:</p> <table style="margin-left: 100px;"> <tr> <td>Melt Flow Index (ASTM D 1238)</td><td>4.0-10.0 g/10min</td></tr> <tr> <td>Density (ASTM D 792)</td><td>0.941-0.965 g/cm³</td></tr> <tr> <td>Tensile (ASTM D 638)</td><td>2000-5000 lb/in²</td></tr> <tr> <td>ESCR (ASTM D 1693)</td><td>Condition C</td></tr> </table> <p>846.02 LOADING. Ensure the adjustment rings meet or exceed the loading requirements of AASHTO'S Standard Specification for HS-25 wheel loading for Highway Bridges.</p>	Melt Flow Index (ASTM D 1238)	4.0-10.0 g/10min	Density (ASTM D 792)	0.941-0.965 g/cm ³	Tensile (ASTM D 638)	2000-5000 lb/in ²	ESCR (ASTM D 1693)	Condition C
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Density (ASTM D 792)	0.941-0.965 g/cm ³								
Tensile (ASTM D 638)	2000-5000 lb/in ²								
ESCR (ASTM D 1693)	Condition C								

SPECIAL NOTE FOR CORROSION RESISTANT GUARDRAIL

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2000 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Furnish and install all necessary material for each type of guardrail according to Section 719.

2.0 MATERIALS.

2.1 Shapes and Plates. Conform to AASHTO M 222.

2.2 Fasteners. Conform to AASHTO M 164, Type 3.

2.3 W-Beams, W-Beam Terminal Section, and W-Beam End Treatments. Conform to ASTM A 606, Type 4 and AASHTO M 180 Type IV. Provide the class the Contract specifies.

2.4 Posts. Use timber posts conforming to Subsection 814.04.02.

3.0 CONSTRUCTION. Do not paint or galvanize. Handle and store guardrail beams so that the traffic face of these beams, used in a continuous run of guardrail, shows no distinctive color differential.

4.0 MEASUREMENT. The Department will measure the quantity of each type guardrail according to Section 719.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Guardrail - Steel W Bm-SFace CR	Linear Feet
----	Guardrail - Steel W Bm-DFace CR	Linear Feet
----	Guardrail Terminal Section, Type, CR	Each
----	Guardrail End Treatment, Type, CR	Each
----	Guardrail Con To Br End, Type, CR	Each
----	Guardrail Con To Concrete Median Barrier CR	Each
----	Guardrail Con To Shoulder Bridge Pier, Type, CR	Each

The Department will consider payment as full compensation for all work required in this note.

September 18, 2001

SPECIAL PROVISION FOR WELDING STEEL BRIDGES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2000 Standard Specifications for Road and Bridge Construction.

For all the welding, welders, welding materials, and welding procedures, conform to the requirements of the Bridge Welding Code, ANSI/AASHTO/AWS D1.5-95, and the modifications and additions herein.

The numbering of the sections, articles, parts, paragraphs, etc. that are included hereinafter are based on the numbering of ANSI/AASHTO/AWS D1.5-95. The plans or proposal will include additional requirements for fracture-critical members, and may include additional requirements for special steels such as ASTM A 588 (AASHTO M 222).

SECTION 1 GENERAL PROVISIONS

Paragraph 1.0 is added as follows:

1.0 Prequalification of Fabrication Shops

1.0.1 Any structural steel fabrication shop in which welded plate girders, or welded boxes or components for bridge trusses, rigid frames, or bridge arches are fabricated shall be qualified and certified as a Category III fabrication shop by AISC.

Proof of this qualification and certification shall be submitted to the Director, Division of Bridges, prior to or along with the first submission of shop drawings. Shop drawings will not be reviewed until this proof has been received.

1.3 Welding Processes

Paragraph 1.3.1.1 is added as follows:

Gas Metal Arc (GMAW), Flux Cored Arc (FCAW), Electroslag (ESW), and Electrogas (EGW) weld processes shall not be used at any location.

SECTION 2 DESIGN OF WELDED CONNECTIONS

2.1 Drawings

Paragraph 2.1.6 is added as follows:

Shop drawings and welding procedures shall be prepared and submitted for review as specified in Section 607.04 of the Department's Standard Specifications. Fabrication shall not begin until shop drawings and welding procedures are

reviewed.

2.6 Joint Qualification

The following is added to Paragraph 2.6.1:

Details of welded joints shown on the design drawings may indicate joint preparation for a manual shielded metal-arc process or for a submerged-arc process. Shop details shall indicate the proper joint preparation for the welding procedure proposed by the shop in instances where the shop prefers a method not detailed on design drawings.

2.8 Details of Plug and Slot Welds

Plug and Slot Welds will not be permitted at any location in any type of steel except where designated on the plans or approved by the Engineer.

2.9 Complete Joint Penetration Groove Welds, and

2.10 Partial Joint Penetration Groove Welds

The following paragraph is added to the 2 articles listed above and will be numbered as follows:

2.9.3 – 2.10.4 Groove welds, except corner and tee joints, shall be finished smooth by grinding each face in the direction of applied stress to a tolerance of plus 1/32 inch and minus zero inch in relation to the face of the base metal.

SECTION 3 WORKMANSHIP

3.1 General Requirements

Paragraph 3.1.6 is added as follows:

Any discontinuities found by the Engineer during the inspection of the fabrication, may lead to further testing by any non-destructive methods as may be directed by the Engineer. The cost of testing will be at the expense of the Department, except as specified in paragraphs 6.5.8 and 6.5.9 herein, and Section 607.15 of the Department's Standard Specifications. The cost of removal and repair of any rejectable discontinuities will be borne by the Contractor.

3.2 Preparation of Base Metal

The following is added to Paragraph 3.2.1:

Mill scale and extraneous material shall be removed from the torch side of

ASTM A 514 (AASHTO M 244) steel plates along the lines to be flame cut, when necessary to obviate excessive notches.

Paragraph 3.2.10 is added as follows:

Sheared plates to be used for webs of built-up members shall be ordered with sufficient additional width to allow for trimming of edges where built-up camber is required. Plates with rolled edges shall be trimmed. Universal mill plates to be used for webs of built-up members shall be ordered with sufficient additional width to allow for trimming of both edges. The faying surfaces of the web and flange plates and the adjacent surfaces that are to be fillet welded shall be cleaned by grinding prior to assembly and welding of web-to-flange. Care shall be exercised to avoid over-grinding.

3.4 Control of Distortion and Shrinkage

Paragraphs 3.4.8 is added as follows:

The welding sequence outlined in the procedure specification shall be such as to avoid needless distortion and shrinkage stresses in accordance with this Article 3.4. For welded plate girders the broad outline of sequence shall be as follows:

1. Flange groove weld
2. Web groove weld
3. Web to flange weld
4. Stiffeners to web welds
5. Stiffeners to flange welds

Paragraph 3.4.9 is added as follows:

All welded shop splices in flanges and webs of girders or frames shall be shown on the shop drawings.

3.7 Repairs

Paragraph 3.7.2.5 is added as follows:

Weld repairs of all material except fracture critical members will be limited to a maximum of 3 attempts to obtain an approved weld. No further attempts shall be made on the member joint involved until the Contractor has proven to the Inspector, by mock-up procedures or otherwise, his ability to properly perform the required weld. Weld repairs on fracture critical members shall comply with the AASHTO Guide Specifications for Fracture Critical Non-Redundant Steel Bridge Members.

SECTION 4 TECHNIQUE

PART B SHIELDED METAL ARC WELDING

4.5 Electrodes for Shielded Metal Arc Welding

Paragraph 4.5.1 is voided and replaced as follows:

All electrodes for shielded metal arc welding shall conform to the requirements of the latest edition of Specification for Covered Carbon Steel Arc Welding Electrodes, ANSI/AWS A5.1 or Specification for Low Alloy Steel Covered Arc Welding Electrodes, ANSI/AWS A5.5, and when used for welding on main members shall be capable of producing weld metal having an impact strength of at least 20 ft.-lbs.. Charpy V-notch, at a temperature of -20 °F or below.

The following is added to Paragraph 4.5.5:

The fabricator shall furnish a test report summary for all lots of electrodes used on main members. All Charpy impact strengths shall be listed in addition to other requirements of ANSI/AWS A5.1 and ANSI/AWS A5.5.

PART C SUBMERGED ARC WELDING

4.8 Electrodes and Fluxes for Submerged Arc Welding

Paragraph 4.8.5 is added as follows:

Flux which shows evidence of moisture pickup shall be dried by heating to above 300 °F for a minimum of 2 hours. Flux which has been left in an unheated dispensing system overnight shall be dried before use by heating to above 300 °F for one hour.

4.9 Procedures for Submerged Arc Welding with a Single Electrode

Paragraph 4.9.2 is voided and replaced as follows:

Web to flange fillet welds shall be made in the flat position. Other fillet welds may be made in either the flat or horizontal position except that single-pass fillet welds made in the horizontal position shall not exceed 5/16 inch. Fillet welds used to connect flange plates to web plates shall be made with a single pass, fully automatic process in the flat position, unless the fabricator has special welding fixtures capable of supporting the flange in a horizontal plane while centering the web on the flange and simultaneously welding both sides of the web to flange connection. The use of this automatic welding fixture must have prior approval before beginning fabrication. This special welding fixture must be capable of maintaining any pre-cut camber specified in the plans. If the centering of the web to the flange or the completed weld does not conform to the applicable specifications, use of the special welding fixture shall be discontinued. Girder

welding machines shall never be allowed when the weld size exceeds 3/8 inch. Attempts to weld girders with a girder machine that result in unacceptable weld profiles will result in the process being disapproved, and the unacceptable welds being completely removed and rewelded with submerged arc process in the flat position. Corrective work will not be allowed.

4.11 Procedures for Submerged Arc Welding with Multiple Electrodes

Paragraph 4.11.2 is voided and replaced as follows:

Web to flange fillet welds shall be made in the flat position. Other fillet welds may be made in either the flat or horizontal position, except that single-pass fillet welds made in the horizontal position shall not exceed 1/2 inch. A fully automatic single-pass submerged arc shall be used to connect the flange plates to the web plates, unless the fabricator has special welding fixtures capable of supporting the flange in a horizontal plane while centering the web on the flange and simultaneously welding both sides of the web to flange connection. The use of this automatic welding fixture must have prior approval before beginning fabrication. This special welding fixture must be capable of maintaining any pre-cut camber specified in the plans. If the centering of the web to the flange, or the completed weld, does not conform to the applicable specifications, use of the special welding fixture shall be discontinued. Girder welding machines shall never be allowed when the weld size exceeds 3/8 inch. Attempts to weld girders with a girder machine that result in unacceptable weld profiles will result in the process being disapproved, and the unacceptable welds being completely removed and rewelded with submerged arc process in the flat position. Corrective work will not be allowed.

SECTION 5 QUALIFICATION

5.7 General Requirements for WPS Qualifications

Paragraph 5.7.1.3 is added as follows:

The procedure specifications shall be recorded as a part of the shop detail drawings and shall be submitted to the Director of Bridges for approval. The procedure specifications shall outline the welding sequence for each welded shop assembly, including shoes and rockers. The procedure specifications shall specify for each type of weld, prequalified or other, the following: joint preparation, fit-up, electrode specification, electrode diameter, welding position, polarity, amperage, and number of passes, indicating any procedure change from one pass to the next in the same weld and indicating the maximum thickness in a weldment layer. Where preheating of the base metal is required it shall be indicated in the procedure specifications. Extension bars used in making butt welds shall be detailed on the shop detail drawings or on the welding procedures. Procedure specifications submitted which are not tailored to suit the particular work to be fabricated shall not be considered as fulfilling the requirements of the contract. Qualification of a

welding procedure established with ASTM A 441, ASTM A 572 (AASHTO M 223), or ASTM A 588 (AASHTO M 222) steel shall be considered as procedure qualification for welding the other two steels, combinations of them or with steels included in Article 9.2 having a lower minimum specified yield point.

Welding of ASTM A 242 steel is considered a special application and a welding procedure qualified for any of the other three steels listed may not be acceptable for A 242 steel.

Procedure qualification records, and procedure specifications shall be submitted on forms E-1 and E-2 of Appendix IV.

5.21 Welders, Welding Operators, and Tack Welders Qualification

Paragraph 5.21 is voided and replaced as follows:

All welders, welding operators, and tackers to be employed under these Specifications shall have been qualified by tests as prescribed in Section 5, Part B of these Specifications. If a fabricating shop prequalifies its welders, welding operators, and tackers in accordance with these Specifications and certifies to the Engineer that the welder, welding operator, or tackers has been prequalified within 24 months previous to the beginning of work on the subject structure and has been doing satisfactory welding of the required type within the 3-month period previous to the subject work, the Engineer may consider him qualified. A certification shall be submitted for each welder, welding operator, or tackers and for each project, stating the name of the welder, welding operator, or tackers, the name and title of the person who conducted the examination, kind of specimens, the position of welds, the results of the tests, and the date of the examination. Such a certification of prequalification may also be accepted as proof that a welder, welding operator, or tackers is qualified, if the Contractor who submits it is properly staffed and equipped to conduct such an examination or if the examining and testing is done by a recognized agency which is staffed and equipped for such purpose. In all cases, welders, welding operators, and tackers shall have been qualified by testing according to KM 64-110 within the previous 24 months of the time of actual weld performance.

PART B WELDER'S, WELDING OPERATOR'S, OR TACK WELDER'S QUALIFICATION

Article 5.21.4 is voided and replaced with the following:

5.21.4 Period of Effectiveness

The welder's, welding operator's, or tack welder's qualification will remain in effect as specified in Paragraph 5.8.1, unless there is some specific reason to question a welder's ability.

SECTION 6 INSPECTION

PART A GENERAL REQUIREMENTS

6.1 General

Paragraph 6.1.1.3 is added as follows:

The Contractor shall submit details of his Quality Control Organization to the Director, Division of Construction, for approval prior to any fabrication. Any material fabricated prior to the approval of the Quality Control Organization or prior to the approval of shop drawings will not be accepted.

The Department will normally perform Quality Assurance (Q.A.) inspection and nondestructive testing in addition to that required to be performed by the Contractor. The frequency of the Quality Assurance nondestructive testing may exceed that required of the Contractor, and the areas tested by the Department may differ from the areas tested by the Contractor. Thus, the percentage of N.D.T. Inspection of a joint may exceed the percentages indicated in paragraphs 6.7.1.2 and 6.7.2.1.

All test results of the Contractor's nondestructive testing shall be provided to the Department's representative or Quality Assurance inspector as directed.

Paragraph 6.1.1.4 is added as follows:

Prior to the start of actual welding operations, the Department's inspector, the fabricator's shop inspector, and welding foreman shall hold a conference to ensure that agreement has been reached regarding details of the procedure and sequence of welding to be followed, the current status of qualification tests or evidence of previous tests, the review status of shop drawings and welding procedures, and approval of electrodes and other materials to be used.

Paragraph 6.1.6 is added as follows:

The Department's Q.A. Inspector will, at his option, use Radiographic Inspection or Ultrasonic Inspection in accordance with Article 6.7 for the inspection of groove welds. Web-to-flange fillet welds will be inspected in accordance with Paragraph 6.7.6 by Magnetic Particle Inspections. The intent of the inspection is to assure the highest quality of welding and workmanship. Any discontinuities found by the Department's Q.A. Inspector during the inspection of the fabrication, may lead to further testing by any non-destructive methods as may be directed by the Engineer. All non-destructive testing performed by the Department's Q.A. Inspector is at no direct cost to the Contractor except as specified in Paragraph 6.5.9 and Section 607.15 of the Department's Standard Specifications. All rejectable defects

found by Q.C. and Q.A. shall be acceptably repaired by the Contractor at no cost to the Department.

6.5 Inspection of Work and Records

Paragraph 6.5.8.1 is added as follows:

The Contractor shall be responsible for establishing an adequate procedure for identifying the structural member being fabricated and the welding operator performing the weld. The procedure for the member identification shall assure positive identification until after erection in the field and the procedure for welding operators shall assure positive identification until after all nondestructive testing of the joint is complete. Neither procedure shall consist of stressrises imprints and both shall be approved by the Engineer. Stenciled imprints may be made along side edges of flanges, and at neutral axes of webs. Subsequent to the assembly of the steel into final members or pieces, the Inspector will be required to furnish the Engineer a complete index properly identifying the type of nondestructive test, report number, test results, and the final mark of the piece, member, or its location in the structure. The Contractor shall furnish to the Inspector assembly marks for each member which will give the final location of each weld. The Inspector shall record the locations of inspected areas and the findings of all nondestructive tests, together with descriptions of any repairs made.

All main member heat numbers will be required to be identified in accordance with Section 607.07 (E) of the Department's Standard Specifications.

The Inspectors shall provide copies of the written nondestructive test reports of unacceptable welds to the Contractor with the Inspector's interpretation. The Contractor shall sign and date each report to acknowledge the required welding repairs. In the event the Contractor questions the Inspector's interpretation of test results, they shall review the test together and the Department's Q.A. Inspector's interpretation will be final.

Paragraph 6.5.9 is added as follows:

The total cost to the Department of all additional testing and visual inspection performed due to the finding of rejectable defects or discontinuities as required by paragraphs 6.7.1.2(2) and 6.7.2.1 shall be charged to the Contractor. Such charge will be deducted from any payment or payments due for the contract.

6.6 Obligations of Contractor

Paragraph 6.6.7 is added as follows:

While every reasonable effort will be made to fit the inspection work to the shop fabricating schedule, the Contractor shall cooperate with the Inspector to

assure that all the work may be inspected properly. The Contractor shall not be entitled to claims against the Department for extra payment or extensions of contract time due to fabricating delays or expenses resulting from the inspection work.

Paragraph 6.6.8 is added as follows:

The Contractor shall furnish power and utilities for operating inspection equipment, shall provide office and shop space for the inspection work, shall handle the material as necessary and shall enforce the required safety precautions for radioactive exposure. No extra payment will be made for such incidentals and the cost thereof shall be included in the lump sum bid for structural steel.

PART B RADIOGRAPHIC TESTING OF GROOVE WELDS IN BUTT JOINTS

6.10 Radiographic Procedure

Paragraph 6.10.3 is voided and replaced with the following:

Welds shall be prepared for radiography by grinding and shall be radiographed after grinding and after backing is removed. If any reinforcement, within the specified tolerances remains after grinding, carbon steel shims shall be placed under the penetrometer so that the total thickness of steel between the penetrometer and the film is at least equal to the average thickness of the weld measured through its reinforcement.

6.11 Acceptability of Welds

Article 6.11 is voided and replaced with the following:

6.11 Refer to Paragraph 9.21.6.

PART C ULTRASONIC TESTING OF GROOVE WELDS

6.13 General

Paragraph 6.13.1 is voided and replaced as follows:

The procedures and standards set forth in this Part C are to govern the ultrasonic testing of groove welds and heat affected zones between the thickness of 5/16 inch and 8 inches inclusive, when such testing is required by Article 6.7. These procedures and standards are not to be used for testing tube to tube T, Y, or K connections (see 10.17.4, AWS D1.1), but may be used as a basis for rejection of defective base metal.

SECTION 7 STUD WELDING

7.4 Workmanship

Paragraph 7.4.5 is voided and replaced as follows:

Longitudinal and lateral spacing of stud shear connectors with respect to each other and to edges of beam or girder flanges may vary a maximum of one inch) from the location shown in the drawings. If a row of shear connectors is located in the vicinity of a welded flange splice that row of shear connectors shall have its spacing adjusted so as to clear the heat affected zone of the flange. The minimum distance from the edge of a stud base to the edge of a flange shall be the diameter of the stud plus 1/8 inch but preferably not less than 1 1/2 inches. Other types of studs shall be so located as to permit a workmanlike assembly of attachments without alterations or reaming.

SECTION 9 DESIGN OF NEW BRIDGES

PART D WORKMANSHIP

9.21 Quality of Welds

The following is added to Paragraph 9.21.5.1:

Restrained joints shall have testing delayed until after all welding is completed or shall be retested after all welding contributing to restraint is completed and cooled. The fabricator is responsible for specifying such joints on shop drawings or welding procedures.

Paragraph 9.21.6 is added as follows:

9.21.6 Weld Quality Acceptance

Welds shown by visual inspection, or by nondestructive testing in accordance with Article 6.7, to have defects prohibited by Paragraph 9.21.1, 9.21.2, or 9.21.3, shall be repaired or removed and replaced, by the methods permitted by Article 3.7, or the entire piece shall be rejected as determined by the Engineer. Repaired or replaced welds shall be reinspected by the applicable nondestructive testing method. All required repairs or replacements shall be at the Contractor's expense.

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